

REMARKS

The present amendment is prepared in accordance with the new revised requirements of 37 C.F.R. § 1.121. A complete listing of all the claims in the application is shown above showing the status of each claim. For current amendments, inserted material is underlined and deleted material has a line therethrough.

Reconsideration is requested in view of the amendments above and the remarks below.

This amendment is in response to the action dated July 12, 2006. That action was 23 pages in length and includes substantial discussion of the various amendments made previously, and the arguments made in support of the patentability of the claims. The Examiner has helpfully identified the arguments made by the applicants with letters A-F on pages 20-21 of the action. This response will refer to those arguments in the subheadings below using lettering corresponding to the Examiner's identification of the arguments A-F on pages 20-21 of the action.

Argument A – Wilker did not teach what should be said in the recorded voice signal – namely, that the recorded voice should tell the public that a safe exit can be found at the location from which the voice signal (and light and non-voice sound signals) emanate

Argument B – The recorded voice should be stored locally at the exit. (claims 1, 16, 17, 22)

The Examiner found these two arguments to be “moot in view of the new rejections.” The applicants respectfully disagree. The new art cited by the Examiner is Dunne et al., United States Patent No. 5,642,092. Dunne teaches an “automatic evacuation assistance system” for assisting pets/animals (column 1, line 10 and

throughout) and ““children or adults with mental impairments” (column 1 line 37) in exiting a structure during an emergency such as a fire.

Initially, it should be noted that this reference does not recognize or suggest a solution to the problem solved by the present invention – exiting a room filled with smoke where vision is obstructed. It specifically does not address the problem solved by the present invention of instructing the public about an alternative fire exit. When the public has entered a public space through a normal entrance, they typically will expect to exit from that location. When a fire occurs, alternative fire exits may be ignored, and the problem is exacerbated when vision is obstructed such that the alternative fire exit visible markings cannot be seen due to smoke.

As Dunne states at column 1, lines 37-40, “Children or adults with mental impairments are also often confused about what steps to take in an emergency. A pre-recorded voice that coaxes the person to proceed to an exit would be extremely helpful.” This invention completely fails to recognize the problem that normal adults have in identifying the location of an exit. Adults with normal mental capacity do not need to be “coaxed” to exit the building. They need to be quickly and effectively informed of the location of a safe exit, an exit that is at a location they likely have never visited or passed through, in an unfamiliar smoke-filled, vision obstructed, environment. The Dunne reference fails to recognize this problem and totally fails to teach or suggest any solution to that problem.

Specifically, the Dunne device includes “an event detector,” and “an exit control device” that opens the exit door. It includes a “sensory attractant transmitter” mounted near the exit that “may include any type of attractant which will get the attention of the animals or persons inside the structure” (column 3, lines 10-11). The attractant may be

"sounds, smells, visual signals and combinations thereof." One specific voice signal offered is "Here kitty, kitty, kitty."

Dunne states at column 3, line 26 that "For attracting people to exit opening 28, other sounds may be used, including a familiar voice of the parent or guardian, asking the person to come to and go out the exit." Although Dunne gives no specifics for the recorded voice signal to be used by a mentally impaired adult or child, it is clear that he does not use the voice signal to tell them about a fire exit they have never been through. He does not use the voice signal to provide information – he uses it to "attract" or "ask" them to come to an exit.

While Dunne discloses a recorded voice located near the exit, he does not disclose the key element of claim 1 that "the recorded voice signal includes words indicating that "an exit is located at the location from which the voice signal is being broadcast." He simply does not teach that key linkage between information in the voice signal (an exit is located at the source of the voice) and the location of the voice signal. Dunne teaches only the second – placing the voice signal near a location, not the critical first half of putting the necessary information in that voice signal.

In each case, Dunne assumes that normal adults will know enough to exit the building in case of a fire. His system operates by "attracting" the pets, animals and mentally impaired adults to a source. That is why he uses the term "sensory attractant transmitter." The attractant may be smells or sounds of food/prey, or a familiar voice, but nowhere does Dunne teach or suggest that the words should actually provide the critical information to the public specified in the voice signal of claim 1. Dunne uses an attractant for those who cannot understand that an emergency requires exiting. Dunne assumes that normal adults will know where the exit is and will act

appropriately. Dunne does not recognize the obscured vision problem (smoke) and the lack of knowledge about the exit location problem (the public enters public spaces through an entrance other than the fire exit).

More specifically, Dunne does not use a "pre-recorded voice signal allowing the public to determine that a safe exit is located at the source of the audibly locatable signal." It is this function of providing information to the public in an emergency that is essential to minimizing the loss of life that has occurred in many public building fires, where available and safe fire exits were not used.

At most, Dunne teaches that a recorded voice of a master or parent may be "an attractant" for animals, children and the mentally impaired.

At page 4 of the action in the rejection of claim 1, the Examiner references the Dunne's suggestion that the voice signal state in the "familiar voice of a parent or guardian" (column 3, line 27) that the child or mentally impaired person "come to and go out the exit." However, this wording clearly omits the key informational content that the sound originates from an exit. It is **not** sufficient that the wording actually be emitted near the exit as occurs in Dunne.. The voice signal must also actually convey that fact in its informational content. "Come to and go out the exit" does not "include words indicating that an exit is located at the location from which the voice signal is being broadcast" as required in all claims of this application.

Argument C – Haus does not teach coordination of light and sound to emphasize the "HERE" portion of the voice signal which tells the public that the voice signal emanates from the location of an exit. (claims 2-4, 23-25)

Haus teaches a coordinated fire alarm and flashing light. The applicants repeat that the prior art fails to teach the critical linkage between the information content of

the recorded voice signal. The words in the recorded voice signal must carry information sufficient that the "public," i.e., those unfamiliar with the building to be exited and the fire exits therein, can tell that "the pre-recorded voice signal is being audibly broadcast from the location of an exit, the pre-recorded voice signal allowing the public to determine that a safe exit is located at the source of the audibly locatable signal."

The claims in question all require the coordination of the audible voice signal and the visual signal in a way that emphasizes the information content of the voice signal linking the location of the voice to the location of the exit. Claim 3 states the "the voice signal includes the word "HERE" to indicate that the source of the voice signal is an exit, and the control circuit coordinates the repeated voice signal and the light source by flashing the light source when the word "HERE" is sent to the speaker output."

This emphasis of the information content carried in a voice signal by flashing a light is **not** taught or suggested by Haus. Haus clearly does provide a visual and sound coordination, but not a coordination between the word "HERE" and the visual signal sufficient to provide emphasis to the **information content** carried in the voice signal that the location of the flashing light is a "HERE" that corresponds to an exit.

The teaching of Haus is sufficient so that one of skill in the art would consider adding a flashing light to a repeated alarm or other audible signal. But it **cannot** be sufficient to teach that the light should flash on the critical information content in the voice signal (that the voice emanates from the actual location of a safe fire exit) when the art does not teach providing that information to the **public** in a voice signal.

If one follows Haus' teaching, the public might see a flashing light and might hear a coordinated alarm, but how would they know that the light was at the source of the sound? Even if they knew that the two were at the same location, how would they know that location was an exit? The normal place for a fire alarm or flashing fire alert is where it can be heard/seen well, which is not necessarily at the location of an exit.

Prior art fire exits might well have both a light and a sound, and they might well coordinate the light and sound, but coordination is not enough. The public is likely to believe that the flashing light and sound simply warn of the danger of a fire, and do not necessarily indicate that the exit can be found at the source of the flashing light and sound. Coordination of a generic light and sound adds nothing to the message. Many fire alarms will not be located at an exit.

In contrast, by emitting a flash of light on the word "HERE" or other voice signal indicating that the source of the voice signal is an exit, the public is receiving information not relayed by mere coordination of light and sound as taught by Haus.

Argument D – The art does not disclose using a broadband "white noise" sound source (which has the characteristic that white noise can be particularly easily directionally located) to allow the location of the exit to be directionally determined solely by sound when smoke obscures vision. (claims 10, 11, 31 and 32)

The Examiner has rejected the claims directed to the use of a white noise generator in view of Potter. Potter teaches the use of a white noise generator, modified to produce a non-white noise signal that is intended to alert "a security person who is specifically listening for the sound, but "would not be noticed by the casual listener." (Potter, column 1, lines 40-44).

Respectfully, this neither suggests nor teaches the present invention. First, the signal that Potter starts with may be a "white noise" signal, but it is intentionally modified with "subharmonics," "resonant" frequencies and "overtones," see Potter Fig. 2. This is not "white noise." The first two definitions of "white noise" in Google's "define: 'white noise'" search are:

1. "A random noise signal that has the same sound energy level at all frequencies." "<http://www.songstuff.com/glossary/W>"
2. "Noise for which the spectrum density is independent of frequency over a specified range." "<http://users.aol.com/incesa/glossary.html>"

The Potter signal is not "white noise." The variations in the graph of Potter's Fig. 2 show that the signal is nowhere near in constant energy content over any range.

More importantly, even if it was white noise, Potter teaches explicitly away from the present invention. Potter teaches that the noise is to be used when it is desirable **not** to notice the signal. The present invention teaches that the signal has a specifically useful property that allows it to be noticed and used. The specification of the present application teaches that white noise "produces an audible multiple frequency signal that can easily be directionally located."

It is this ability of the human ear to directionally locate the source of the white noise that is used in the present invention. The Examiner has not cited any reference which recognizes this nor which teaches its use in guiding the public to a safe fire exit. At most, Potter would teach the art that white noise cannot be heard or "noticed."

Argument E – the art does not teach the *combination* of sound, light and voice in a "control circuit" integrated into the case of "fire exit door hardware," such as a pushbar door exit device or an automatic door closer (all claims)

All of the claims specify that the alarm and alert system of the present invention is integrated into the case that also includes "fire exit door hardware." As set forth in the specification, "fire exit door hardware "include[s] exit devices that retract a latch and open the fire exit door when an outward pressure is applied to a push plate or push bar and automatic door closers that act to limit the spread of fire and smoke when the exit door is not in use."

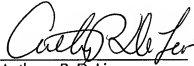
These latches, pushbar devices and automatic door closers are already installed on many fire exit doors. The present invention adds the voice recording and fire detection functionality so that the public can be advised during a fire as to the location of the fire exit on which the fire exit door hardware is installed. It is respectfully submitted that the art fails to show a door closer or other fire exit door hardware having the combined features of the present invention.

Argument F – The art does not teach using a laser to form a cone having an "apex at the fire exit alert system" pointing towards the location of the exit.

The applicants appreciate the Examiner's efforts to draw their attention to column 6, lines 6-27 of Watanabe. As the Examiner correctly states, this shows a light cone which converges towards the exit, rather than the diverging cone of the other figures in Watanabe. However, it does not show a "laser producing a cone having an apex at the fire exit alert system" as claimed. The cone apex in Fig. 7 is clearly not "at the fire exit alert system" as claimed.

It is respectfully submitted that the application has now been brought into a condition where allowance of the entire case is proper. Reconsideration and issuance of a notice of allowance are respectfully solicited.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'Anthony P. DeLio', written over a horizontal line.

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